

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009789**Date Inspected:** 28-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Yumin and Wu Zhi Cheng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Joe Alaniz was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

Trail Assembly Yard

1AAE+1AE

This QA Inspector performed Magnetic Particle (MT) inspection of weld joint OBE1A-003 (internal) transverse indication excavations performed and accepted by ZPMC. Y locations inspected are as followed:

1. Y location 3460mm (off off bike path side), length of excavation 470mm, depth of excavation approximately between 16.55~18.94mm.
2. Y location 4730mm (off off bike path side), length of excavation 300mm, depth of excavation approximately between 16.55~18.94mm.
3. Y location 6570mm (off off bike path side), length of excavation 125mm, depth of excavation approximately between 16.45~21.65mm.
4. Y location 8190mm (off off bike path side), length of excavation 200mm, depth of excavation approximately between 18.13~21.32mm.

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

1AW+1BW

This QA Inspector performed Magnetic Particle (MT) inspection of weld joint OBE1A-007 (external) transverse indication excavations performed and accepted by ZPMC. Y locations inspected are as followed:

1. Y location 7080mm (off bottom and side plate weld joint), length of excavation 540mm, depth of excavation approximately between 12.68~19.33mm.
2. Y location 7880mm (off bottom and side plate weld joint), length of excavation 230mm, depth of excavation approximately between 13.84~15.82mm.

1AW+1BW

SMAW repair welding on weld joint 003 located at OBE1A bottom plate (internal).

Welder is identified as Mr. Yun Chengxian (045138). ZPMC QC is identified as Xu Yumin. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-1G (1F)-FCM-Repair-1 and CWR repair procedure #868.

Y Location of excavation by above noted welder (045138) is located at approximately 170mm and is 220mm in length.

SMAW repair welding on weld joint 003 located at OBE1A bottom plate (internal).

Welder is identified as Mr. Zang Yanbo (045796). ZPMC QC is identified as Xu Yumin. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-1G (1F)-FCM-Repair-1 and CWR repair procedure #868.

Y Locations of excavations by above noted welder (045796) is located at approximately 1145mm (125mm in length) and at approximately 2280mm (800mm in length). Y Location was measured off the side and bottom plate weld joint on bike path side of segment.

1AW+1BW

SMAW repair welding on weld joint 009 located at OBW1A side plate (internal).

Welder is identified as Mr. Han Xiaofeng (054467). ZPMC QC is identified as Wu Zhi Cheng. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G (3F)-FCM-Repair-1 and CWR repair procedure #875.

SMAW repair welding on weld joint 009 located at OBW1A side plate (internal).

Welder is identified as Mr. Dai Lu (048659). ZPMC QC is identified as Wu Zhi Cheng. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G (3F)-FCM-Repair-1 and CWR repair procedure #875.

NDT Observation

This QA Inspector observed ZPMC Magnetic Particle (MT) Technician performing MT on various locations in the

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

trial assembly yard. Locations are as followed:

1AW+1BW

Excavation areas on OBW1A-007 side plate splice. Y Location, lengths and numbers of transverse indications are as followed at the time of observation:

1. Y location 7080mm (off counter weight side), length of excavation 540mm and approximately 3 MT transverse indications.
2. Y location 7880mm (off counter weight side), length of excavation 230mm and 0 MT transverse indications.

This QA Inspector observed ZPMC Ultra Sonic (UT) Technician performing UT on various locations in the trial assembly yard. Locations are as followed:

Miscellaneous Work In Progress

QA Inspector observed ZPMC's personnel performing various job functions in the trial assembly yard. Locations and description of work are as followed:

UT reject excavation was performed at OBW1-006 deck plate (external) weld joint on segment 1E. Y locations (pulled from counter weight side), lengths and depths area as followed:

1. Y location 6630mm (off counter weight side), length of excavation 150mm, depth of excavation approximately between 12.80~14.67mm.
2. Excavation will be performed on inside of segment
3. Y location 10300mm (off counter weight side), length of excavation 145mm, depth of excavation approximately between 11.57~14.90mm.
4. Y location 12460mm (off counter weight side), length of excavation 145mm, depth of excavation approximately between 13.36~17.03mm.
5. Y location 15600mm (off counter weight side), length of excavation 180mm, depth of excavation approximately between 12.69~13.36mm.
6. Y location 16500mm (off counter weight side), length of excavation 130mm, depth of excavation approximately between 12.23~14.79mm.
7. Y location 16720mm (off counter weight side), length of excavation 130mm, depth of excavation approximately between 10.62~12.10mm.
8. Y location 20100mm (off counter weight side), length of excavation 135mm, depth of excavation approximately between 12.81~15.74mm.
9. Y location 21000mm (off counter weight side), length of excavation 135mm, depth of excavation approximately between 13.88~14.71mm.
10. Y location 21610mm (off counter weight side), length of excavation 135mm, depth of excavation approximately between 12.89~14.83mm.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (134-8257-0045), who represents the Office of Structural Materials for your project.

Inspected By:	Alaniz,Joe	Quality Assurance Inspector
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Reviewed By:	Carreon,Albert	QA Reviewer
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